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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Intellectual Property Administration
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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/678,168

Applicant(s)

COCHRAN, ROBERT ALAN

Examiner

Akiba K Robinson-Boyce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Due to communications filed 12/29/03, the following is a final office action. Claim 6 has been amended. Claims 1-20 are pending in this application and have been examined on the merits. The previous office action has been withdrawn and the following office action reflects the claims as amended, and also clarifies some language in the rejection. Claims 1-20 are rejected as follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 6, 10, 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kilkki et al (US 6,011,778).

As per claims 1, 10, 15, Kilkki et al discloses:

establishing a pricing tier for each request generating device, a maximum rate of request servicing, and an expected time for serving a request at the maximum rate of request servicing/a memory that contains an established maximum rate of request servicing, an expected time for serving a request at the maximum rate of request servicing and a pricing tier for each request generating device and that contains/ wherein the maximum rate of request servicing is established via specification of a maximum rate of request servicing by the request generating device (Col. 5, lines 15-16, [charging based on NBR value represents pricing tier]), Col. 11, lines 19-20, [maximum NBR, represents maximum rate], Col. 3, lines 32-34, [where the NBR (nominal bit rate) connection by way of UNI (user network interface as shown in Col.5, lines 60-63) over an NBR service connection, represents request generating device since the user is shown to make an NBR request via the network in col. 6, lines 36-42], Col. 10, lines 10-26, [memory represents the memory]);

for each request generating device with a premium pricing tier, maintaining an instantaneous rate of request servicing by the request servicing device/for each request generating device with a premium pricing tier, an instantaneous rate of request servicing by the request servicing device; (Col. 11, lines 22-24, [instantaneous NBR]);

control functionality that services electronic requests received from the request generating devices and that, following servicing of each request from a request generating device by the request servicing device, determines a time elapsed during servicing of the request so that, when the time elapsed during servicing of the request is less than the expected time for serving a request established for the request generating

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device, the control functionality calculates a remaining time equal to the difference between expected time for serving a request established for the request generating device, (Col. 5, line 60-Col. 6, line 1, [where the request generating device is represented by the UNI (user network interface) over an NBR service connection, and the request servicing device is represented by the actual NBR service connection alone, in this case, the time elapsed is represented by the transmission rate of information elements as shown in Col. 3, lines 26-30. It is also shown in Col. 13, lines 40-52, that the transmission rate time interval is monitored and when the difference between the transmission rate time interval differs from the expected value, when the transmission rate is less than the expected time, a positive result is produced, which represents the time remaining])

determining a time elapsed during servicing of the request (Col. 12, line 57, [elapsed time]);

when the time elapsed during servicing of the request is less than the expected time for serving a request established for the request generating device, calculating a remaining time equal to the difference between expected time for serving a request established for the request generating device and the time elapsed during servicing of the request, (Col. 14, lines 2-5, [where the servicing of the request is less than the expected time is represented by the positive number], Col. 12, lines 62-65, [difference in time], also, as described above, in Col. 13, lines 40-52, the transmission rate time interval is monitored and when the difference between the transmission rate

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time interval differs from the expected value, when the transmission rate is less than the expected time, a positive result is produced, which represents the time remaining]);

and waiting for a length of time based on the calculated remaining time prior to servicing another request for the request generating device/ and the time elapsed during servicing of the request and waits for a length of time based on the calculated remaining time prior to servicing another request for the request generating device, (Col. 14, lines 8-19, [where length of time is determined by priority level]).

As per claim 6, Kilkki et al discloses:

wherein the maximum rate of request servicing is established via specification of a maximum rate of request servicing by the request generating device, (Col. 11, lines 19-20 w/ Col. 6, lines 36-44, [UNI serves as the request generating device]).

As per claim 20, Kilkki et al discloses:

wherein the length of time based on the calculated remaining time determined by the request servicing device to be greater than the calculated remaining time for a request generating device is further determined to be a ratio multiplied by the calculated remaining time, the ratio calculated by dividing the instantaneous rate of request servicing by the expected time for serving a request, and wherein the length of time based on the calculated remaining time determined by the request servicing device to be less than the calculated remaining time for a request generating device is further determined to be a ratio multiplied by the calculated remaining time, the ratio calculated by dividing one by the difference between the expected time for serving a request and the instantaneous rate of request servicing, (Col. 22, lines 11-16).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3, 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilkki et al (6,011,778).

As per claims 2, 11, Kilkki et al discloses:

the calculated remaining time for a request generating device for which the established pricing tier is a basic pricing tier, (Col. 5, lines 15-16, [charging based on the duration of the connection];

the calculated remaining time for a request generating device for which the established pricing tier is a premium pricing tier and the instantaneous rate of request servicing is equal to the maximum rate of request servicing established for the request generating device/greater than the calculated remaining time for a request generating device for which the established pricing tier is a premium pricing tier and the instantaneous rate of request servicing is greater than the maximum rate of request servicing established for the request generating device; and less than the calculated remaining time for a request generating device for which the established pricing tier is a premium pricing tier and the instantaneous rate of request servicing is less than the maximum rate of request servicing established for the request generating device, (Col.

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11, lines 22-24, [where Kilkki et al does not specifically state that the instantaneous rate equal to , greater than, or less than the maximum rate of request servicing, however, this limitation is represented by the selection of the appropriate instantaneous NBR in relation to each price and quality of service for a service request]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the instantaneous rate to be equal to, greater than or less than the maximum rate of request servicing with the motivation of applying an appropriate value for the instantaneous rate depending on the details of the service request.

As per claims 3, 12, Kilkki et al discloses:

wherein the request generating device is a computer, (Col. 6, lines 37-41, [UNI=user network interface=a computer]).

7. Claims 4-5, 7-9, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilkki et al (6,011,778), in further view of Storch et al (US 5,920,846).

As per claims 4, 13, Kilkki et al fails to disclose the following, however Storch et al discloses:

wherein the request servicing device is an electronic data storage device, (Col. 9, lines 43-46, [data storage, also shown that data storage processes a service request in]). Storch et al discloses this limitation in an analogous art for the purpose of showing that requests can be stored in a device.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the request servicing device to be an electronic data storage

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device with the motivation of having means to save the request made by the user for future applications.

As per claims 5, 14, both Kilkki et al and Storch et al fail to disclose:

wherein the electronic data storage device is a disk array.

Official notice is taken that it is old and well known in the computer art for an electronic data storage device to be a disk array. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the electronic data storage device to be a disk array with the motivation of having reliable and easily accessible means for retrieving stored data.

As per claim 7, 16, Kilkki et al fails to disclose, however Storch et al discloses:

wherein the maximum rate of request servicing is established by partitioning the capacity of the request servicing device among the request generating devices in order to provide, when possible, each request generating device with a maximum rate of request servicing specified by the request generating device, and otherwise to provide each request generating device with a maximum rate of request servicing proportional to a maximum rate of request servicing specified by the request generating device, (Col. 58, line 59-Col. 60, line 2, [time intervals being divided]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to partition the capacity of the request servicing device with the motivation of making it easier to service the requests in a shorter period of time.

As per claim 8, 17, Kilkki et al fails to disclose, however Storch et al discloses:

wherein the request servicing device may dynamically alter the maximum rate of request servicing provided to one or more request generating devices in accordance with a rate at which the request servicing device receives requests and according to the request servicing capacity of the request serving device, (Col. 59, lines 2-9, [overriding]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to alter the maximum rate of request servicing provided with the motivation of adjusting rate request data in order to allow the requests to conveniently get serviced in an appropriate amount of time.

As per claim 9, 18, 19, Kilkki et al discloses:

increasing the instantaneous rate of request servicing for the request generating device by one following servicing of a request generated by the request generating device, and decreasing the instantaneous rate of request servicing for the request generating device by one at regular intervals of time/wherein separate execution threads in a firmware or software implementation of control functionality within the request servicing device increase the instantaneous rare of request servicing and decrease 5he instantaneous rate of request servicing, (Col. 14, lines 9-13, [decrease or increase priority level]);

Kilkki et al fails to disclose, however Storch et al discloses:

initially setting the instantaneous rate of request servicing for a request generating device to one request divided by the expected time for serving a request at

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the maximum rate of request servicing established for the request generating device(Col. 1, lines 50-51, [time division multiplexing]).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to initially set the instantaneous rate of request servicing for a request generating device to one request divided by the expected time for serving a request with the motivation of servicing the request at a considerable amount of time.

Response to Arguments

8. Applicant's arguments filed 12/29/03 have been fully considered but they are not persuasive.

The applicant argues that Kilkki et al relates to a method for "controlling the priority assigned to information elements transmitted across a network connection", and prioritizes messages, accepts/rejects messages based on transmission rates and priorities, but does not alter a time before servicing a next request on behalf of a request generating device. However, Kilkki et al discloses a system where requests are made by a user as shown in Col. 6, lines 39-44. Here the user makes a nominal bit request (NBR) for a cell transmission. In addition, Kilkki et al shows that the transmission rate time interval is monitored and when the difference between the transmission rate time interval differs from the expected value, when the transmission rate is less than the expected time, a positive result is produced, which represents the time remaining before the next cell transmission in col. 13, lines 40-49. In Col. 13, lines 49-52, it goes on to explain that the positive result is sensed and the priority level assignment is altered to

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subsequently transmitted cells. In this case, the altered time is represented by the altered priority level assignment to subsequently transmitted cells since the priority of the cells transmitted is time-induced as shown in col. 3, lines 43-52.

In addition, the applicant argues that Storch et al is unrelated to the Applicant's claimed method, and that Storch et al's data storage is used to store installation information and makes no indication that it service requests from request generating devices. However, Storch et al is related to the claimed invention through disclosing electronic service requests in the Abstract, lines 5-8. In addition, Storch et al discloses a data storage that processes a service request in Col. 9, lines 20-22.

For the reasons stated above, the rejections using the Kilkki et al and Storch et al references have been maintained.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Friday, 8:30 am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


A. R. B.


TARIQ R. HAFIZ
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